I hereby certify that this correspondence is being filed via EFS-Web with the United States Patent and Trademark Office on March 16, 2009.

TOWNSEND and TOWNSEND and CREW LLP

By: / Stephanie Klepp /
Stephanie Klepp

PATENT
Attorney Docket No. 019680-009000US
Client Ref. No. P001140

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Confirmation No. 2868
Wayne D. Young	Examiner: Aaron M. Richer
Application No.: 10/796,695	Technology Center/Art Unit: 2628
Filed: March 8, 2004	APPELLANT'S REPLY BRIEF
For: ERROR ACCUMULATION DITHERING OF IMAGE DATA	

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Appellant offers this Reply Brief in response to the Examiner's Answer mailed March 4, 2009 ("Examiner's Answer"). Examiner's Answer was in response to the Supplemental Appeal Brief filed February 17, 2009 ("Appeal Brief"). The following remarks are intended to further focus the issues in this appeal.

Remarks

In response to the arguments in the Examiner's Answer, Appellant wishes to address a number of issues raised therein.

Claims 1, 12, and 20 are the independent claims, and claim 1 will be used as a representative claim for purposes of argument. Claim 1 sets forth a method of dithering an image. A target color at a high color resolution is received for a current pixel, the target color being intermediate between a first color and a second color at a low color resolution. An accumulated error is tracked across the pixels, up to and including the current pixel.

Claim 1 provides for "**selecting** one of the *first color* and the *second color* as a **final pixel color** ... [for] **outputting** ... for display on a display device" (emphasis added).

To teach this element of the claims, the Examiner cites Quintana, which instead suggests selecting, for a pixel, between:

a first color to be output as a final pixel color (Quintana, ¶ [0016]; FIG. 1 and 3, ref. num. 106), or

no output and a subsequent selection process for one or more other colors (Quintana, ¶¶ [0018]).

In Quintana's method, when "an output pixel" is "not output" the "method 100 proceeds to advance to the next color component." The Examiner appears to argue that, for a pixel, the selection of **no output and an additional color selection process** is the equivalent of selecting a particular color as the final pixel color to be output. This argument falls far short, as the dithering of the claims is a fundamentally different method than the one set forth in Quintana.

It will likely be most productive to review aspects of the claims, and then respond to the assertions of the Examiner. In claim 1, for example, one of a first color and a second color are output as a final pixel color for display, wherein the first color is selected in the event that the accumulated error is less than a threshold, wherein the second color is selected in the event that the accumulated error exceeds the threshold, and wherein the accumulated error is reduced below the threshold in the event that the second color is selected. Quintana cannot be relied upon to teach or suggest 1) selecting one of a first color or second color as a **final pixel color**, or 2) the

recited process of **selecting** between one of a **first color** or **second color**, as generally set forth in independent claims 1, 12, or 20.

1. Final Pixel Color: As discussed in the Appeal Brief, the independent claims generally provide for selecting between a "first color" and "second color" for a ***final pixel color***. But in Quintana, there is no selection between a first color and a second color for a final pixel color. Instead, the method disclosed in Quintana involves the determination whether to output an output pixel, or not (Quintana, ¶0014, 0015, 0018, 0026, and 0032). If the output pixel for the color is not output, determinations as to whether to output other colors as the final pixel color for the pixel are then made. The decision to not output a pixel in Quintana may, therefore, be likened to an intermediate determination in the final pixel color decision.

But the Examiner's Answer asserts that "not printing a dot on a paper produces a final pixel color" (Examiner's Answer, p. 12, ll. 11-12). The Examiner maintains this assertion even though in Quintana:

> if the method 100 has determined to ***not output*** an output pixel for the color component in 102 (104), and there are further color components of the image pixel (110), ***then the method 100 proceeds to advance to the next color component (112), and repeats 102, 104***, and so on. (Quintana, ¶0018)

In Quintana, therefore, a determination to not output an output pixel causes the output determination process to continue for a next darkest color component. While Appellant believes that these facts conclusively show that no final pixel is identified with the determination, the Examiner continues to disagree. To overcome this, the Examiner asserts that a "dot printed for each color component is considered a pixel in printing applications" (Examiner's Answer, p. 12, l. 22-p. 13, l. 1). This definition differs from the one set forth in Quintana (which repeatedly notes that there may be a number of color components in an image pixel). This definition also seems to be of questionable relevance because the claims are drawn to display devices, not printers.

The Examiner states that "the Quintana reference discloses a decision to output a pixel that is either: a) the color of ink being output or b) the previously existing color of paper," and dismisses "future inks applied to the paper" for that pixel region (Examiner's Answer, p. 15,

ll. 6-7). The Examiner's position is that the decision to not output a pixel in Quintana is equivalent to the decision to output a particular color as the final pixel color set forth in the claims. But the decision to not output a pixel in Quintana causes no output pixel to be output for that color, and triggers other color determinations for the pixel to be undertaken. Thus, while the claims recite a process of selection between a first and second color as the final pixel color, Quintana differs. Even assuming, *arguendo*, that the decision not to output of Quintana was equivalent to the color of the paper, this would not be the final pixel color. Instead, this merely triggers other color determinations for the pixel to be undertaken to choose the final pixel color.

2. Selecting Between First Color and Second Color for Output: As introduced above, the independent claims generally provide for selecting between a "first color" and "second color." In Quintana, the determination at issue involves whether to output a ***current color component*** for the current pixel, ***or not.***

The Office has conceded that in Quintana, a "pixel ... is turned off, or not output," which plainly differs from the present claims (Final Office Action, p. 2, l. 9). The Office nonetheless appears to contend that a decision to **not output an output pixel color** in Quintana is *equivalent* to the decision to **output the second color** for the current pixel, as set forth in the claims.

This line of argument is maintained in the Examiner's Answer. The Examiner continues to assert that the Quintana reference is disclosing that in deciding to not output a color pixel, Quintana "still considers the location to have a color" (Examiner's Answer, p. 15, ll. 1-4). It appears, therefore, that the Examiner is arguing that a decision to not output a color is the same as the decision to output a selected color. Appellant contends that with this perspective, it is evident that the actions are different and further elaboration is not necessary.

The Office Action rejected independent claims 1, 12, and 20 under 35 U.S.C. §102(e) as anticipated by Quintana. For a valid anticipation rejection, the Office must show that each limitation from the claims appears in a single piece of prior art. The Federal Circuit recently reaffirmed that "unless a reference discloses within the four corners of the document not only all of the limitations claimed but also all of the limitations arranged or combined in the

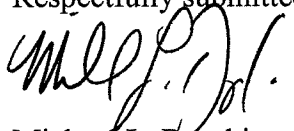
same way as recited in the claim, it cannot be said to … anticipate under 35 U.S.C. § 102." Net MoneyIn v. Verisign (Fed. Cir. 10/20/08). Appellant, however, believes that significant limitations from the independent claims are not taught or suggested by Quintana, and that Quintana certainly does not include the limitations arranged in the same way as recited in the independent claims.

Appellant submits that the specified limitations in independent claims 1, 12 and 20 are allowable for at least the foregoing reasons. Claims 2, 3, 6-11 and 13-19 each depend from these independent claims, and are believed allowable for at least the same reasons as given above. Appellant, therefore, respectfully requests that the §102(b) and §103(a) rejections to these claims be reversed.

CONCLUSION

Thus, for at least these reasons as well as the reasons stated in the Appellant's Appeal Brief, which are hereby incorporated by reference, it is believed that the above claims are entitled to allowance. Appellant respectfully asks the Board to reverse each of the rejections of the Examiner. Although Appellant believes no fee is due, please deduct from Deposit Account 20-1430 any fees that are due in association with the filing of this Reply Brief.

Respectfully submitted,



Michael L. Drapkin
Reg. No. 55,127

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 303.571.4000
Fax: 415.576.0300
61847422v1